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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,501	03/16/2001	Giles Henry Rodway	RK590-US1	3959

7590 05/17/2005

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EXAMINER

KRUER, KEVIN R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/787,501

Applicant(s)

RODWAY, GILES HENRY

Examiner

Kevin R Kruer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-33, 37-40, 42, 43, 46-54, 57-71, 74 and 75 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-33, 37-40, 42, 43, 46-54, 57-71, 74 and 75 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The substitute specification filed February 7, 2005 has not been entered because it does not conform to 37 CFR 1.125(b) and (c) because: the substitute specification contains new matter. Specifically, the original disclosure does not support the following amendments:

Paragraphs 00006-00007

The original disclosure does not support said amendment. There is no support in the original disclosure for embodiments wherein the weight percentages are based upon the weight of the first polymeric component. Applicant points to claim 2 of the PCT specification for support. However, claim 2 supports the phrase "weight of the polymeric portion," not "weight of the first polymeric component."

There is also not support for the limitation that the second polymeric component comprises at least 90% by weight "based on the weight of the second polymeric composition." Applicant points to page 2 of the PCT disclosure for support. However, said disclosure fails to disclose what the weight percentage is based upon.

Paragraph 00014

The amendment contains new matter. The amendment cancels the time during which the wire is immersed in acetone.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 28-33, 37-40, 42-54, 68-71, 74, and 75 are rejected under 35 U.S.C. 112, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support in the original disclosure for embodiments wherein the weight percentages are based upon the weight of the first polymeric component or the "first polymeric composition."

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 28-32, 37-40, 42, 43, 46, 51-54, 57-67, 71, 74, and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO97/27260 (herein referred to as "Miyaki") in view of Vogdes et al (US 4,693,940).

Miyaki teaches a fluorinated composition comprising:

- (a) 100 parts by weight of a PVDF resin,
- (b) 5-100pbw of an acrylic and/or methacrylic polymer having functional groups, and
- (c) 10-200 pbw of a vinylidene fluoride copolymer (page 4, lines 16+).

The acrylic and/or methacrylic polymer comprises acrylic ester copolymers comprising at least 50wt% acrylate and/or methacrylate (page 3, lines 14+). The

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composition may be utilized to bond fluorinated resins, particularly PVDF and copolymers thereof to metals (page 5, line 20), and finds utility in fields such as electric wire coating (page 5, line 15). The layers may be co-extruded (example 6). Said composition is understood to read on the "first layer" wherein the component (b) is the "first polymeric composition" and the "first polymeric component."

Miyaki does not teach that the interlayer surfaces of the PVDF should be irradiated. However, Vogdes teaches a method of enhancing the bonding between incompatible polymers in a laminate structure by irradiating the laminate (col 1, lines 63+). The method results in part from chemical crosslinking across the interface between the layers. It is therefore essential that each of the polymeric compositions be radiation crosslinkable. Radiation crosslinking agents are preferably included in the composition to assist in making them radiation crosslinkable and to improve the strength of the bond between the layers (col 2, lines 36+). The crosslinkers are included in one or both compositions (see Tables A and B). The method should be done at such conditions to allow for at least a two-fold increase in the peel strength of the laminate (col 3, lines 41+). Specifically, heat treatment of the laminate should be carried out at a temperature higher than the melting point of at least one, and preferably all of the polymers in each of the compositions (col 3, lines 49+). The method is especially useful in for heat shrinkable tubes, especially for electrical insulation purposes (col 2, lines 51+). It would have been obvious to one of ordinary skill in the art to irradiate the laminate taught by Miyaki in order to improve interlayer adhesion.

With regards to the claimed bond strength and delamination limitations, Vogdes teaches that the amount of bonding is proportional to the conditions in heat treatment and irradiation steps (col 3, lines 41+) as well as the amount of crosslinker present (col 2, lines 42+). Thus, it would have been obvious to one of ordinary skill in the art to vary the radiation and heat treatment steps as well as the amount of crosslinker present in order to control the adhesive strength of the resulting substrate to the adhesive taught in Miyaki.

With regards to the method limitations of claims 2, 5, 10, and 11, the examiner takes the position that the method of making a product does not patentably distinguish said product from a product taught in the prior art unless it can be shown that the method of making the product inherently results in a materially different product. In the present application, no such showing has been made.

With regard to claims 31, 32, 37, 46, 47, and 67, the examiner takes the position that Miyaki reads on said composition wherein the polyethylene content is 0%.

With regard to claims 42 and 65, component b is understood to read on the claimed polymer wherein the polymer contains 15-28wt% of repeating units containing carboxylic acid ester groups and the other 85-72wt% also comprise repeating units containing carboxylic acid ester groups. Furthermore, component b is understood to read on the carbonyl-containing polymer of claims 47-50 and 68-70 because the acrylates taught in Miyaki are understood to be "derived from ethylene."

5. Claims 33, 47-50, 61, and 68-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO97/27260 (herein referred to as "Miyaki") in view of Vogdes et al

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(US 4,693,940), as applied to claims 28-32, 37-40, 42, 43, 46, 51-54, 57-67, 71, 74, and 75 above, and further in view of Bartoszek (US 4,804,702).

Miyaki in view of Vogdes is relied upon as above, but does not teach that the PVDF layer should comprise a copolymer of VDF and hexafluoropropylene. However, Bartoszek teaches a composition comprising a PVDF co-polymer with a hexafluoropropylene of 12wt% (see claim 2) that exhibits improved smoke and flame retardant properties (abstract). Said polymers are especially useful in the wiring industry (col 1, lines 6+). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the composition taught in Bartoszek as the PVDF layer taught in Miyaki. The motivation for doing so would have been that said composition is flame and smoke retardant.

Response to Arguments

Applicant's arguments filed February 2, 2005 have been fully considered but they are not persuasive.

Applicant notes "for the sake of completeness" that similar rejections to the outstanding rejections were noted as being overcome in the Office Action mailed October 20, 2003. The examiner notes that the pending claims are of a different scope than the claims examined in the October 20, 2003 rejection. Furthermore, the examiner has the right during prosecution to change positions.

With regard to Miyaki, Applicant argues the objective taught in Miyaki is different from Applicant's objectives. Applicant's argument is noted. However, it is noted that

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the objective of the prior art does not need to be the same as applicant's objective to teach or render obvious the claimed invention.

Applicant further argues Miyaki fails to disclose or suggest the claimed invention and points away from the claimed invention by making it clear that Miyaki, in order to achieve his objective, must avoid the use of compositions as defined by Applicant's claims. The examiner initially notes that Miyaki was relied upon in combination with Vodges and, therefore, does not have to disclose the claimed invention. The examiner also disagrees with applicant's conclusion that the composition taught in Miyaki is outside the scope of the claimed composition because it specifies the proportions of polymers (a), (b), and (c). For the reasons noted in the rejection, the composition taught in Miyaki is understood to read on the "first layer." Specifically, the component (b) is understood to read on the "first polymeric composition" and the "first polymeric component."

Applicant argues the examiner's interpretation of the reference overlooks the fact that the claims require carbonyl-containing polymer be present in an amount much greater than the 50% maximum set by Miyaki. The examiner respectfully disagrees. The claims require that the "first polymeric component" comprise at least 60wt% of carbonyl-containing polymer. Miyaki teaches that 100% of the first polymeric component (understood to be component (b) of the composition taught by Miyaki) comprises carbonyl-containing polymer. With regard to claims 57, 62, and 71, component (b) is understood to read on the claimed "first polymeric composition" and is understood to comprise 100% of said first polymeric composition.

With regard to Vodges, Applicant argues said reference is concerned with the adhesion between two layers of incompatible polymers, not the adhesion between a metal substrate and a VDF polymer. There is no reason, according to applicant, why one would seek to modify Miyaki's teaching would regard Vodges as a useful source of information. The examiner respectfully disagrees. Miyaki teaches a three-layer laminate comprising a fluorinated resin layer, particularly PVDF, an adhesive layer, and a metal layer (page 5, line 20). Thus, one of ordinary skill in the art would have been concerned with the adhesion not only between the adhesive layer and the metal layer, but also the adhesion of the adhesive layer to the fluorinated resin layer.

Therefore, the rejection is maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin R. Kruer
Patent Examiner-Art Unit 1773